DEPARTMENT OF THE NAVY
NAVAL SUPPLY SYSTEMS COMMAND
5450 CARLISLE PIKE
PO BOX 2050
MECHANICSBURG PA 17055-0791

NAVSUPINST 4100.4B
SUP 4251
27 FEB 98

NAVSUP INSTRUCTION 4100.4B

Subj: NAVAL SUPPLY SYSTEMS COMMAND ENERGY MANAGEMENT PROGRAM

Ref: (a) OPNAVINST 4100.5D
(b) DOD 5126.46 M-2
(c) NAVFACINST 11300.37A
(d) NAVFAC ltr 4101/01 1354 of 26 May 94
(e) OPNAVINST 4100.7A

1. Purpose. To promulgate and to amplify the policy, goals and objectives of the Navy Energy Management and Conservation Plan and to assign responsibilities for implementation within the Naval Supply Systems Command (NAVSUP). This instruction has been extensively revised and should be read in its entirety. Specific additions, deletions or revisions have not been marked. The major source of this instruction is reference (a).

2. Cancellation. NAVSUPINST 4100.4A.

3. Background. Reducing the dependence of the Navy on petroleum resources, where cost-effective and practical, will enhance energy security and reduce costs. Dedicated attention to energy management is needed at both the field activities and at NAVSUP Headquarters.

4. Assumptions and Goals

a. Assumptions:

(1) Conservation goals are measured from the Fiscal Year (FY) 1985 baseline (1 October 1984 to 30 September 1985) unless otherwise indicated.

(2) The unit of measure/consumption is defined as British Thermal Unit (BTU) equivalents.

(3) The conversion factor for purchased electricity is 3,413 BTU per kilowatt-hour.

b. Goals:

(1) Existing Buildings. The Navy’s goal is to reduce energy consumption per thousand gross square feet by 30 percent by the end of FY 2005 as compared to the baseline (FY 1985).

(2) Industrial Activities. The Navy's goal is to improve gross energy efficiency 20 percent by FY 2005 as compared to FY 1990.

(3) Energy and Water Projects. The Navy's goal is to identify and execute by FY 2005 all shore facilities' energy and water conservation projects with a payback period of less than 10 years.

5. Reporting Requirements: Monthly Defense Utility Energy Reporting System (DUERS) and Annual Energy Report.

a. References (a), (b) and (c) provide authority for the monthly submission of energy related data to DUERS. DUERS, formerly known as DEIS II, is the automated management information system Department of Defense (DOD) uses to monitor and report its energy consumption. The Navy provides its data to DUERS through the Navy's Energy Audit Report (EAR), via the Micro-EAR, a system established and maintained by the Naval Facilities Engineering Service Center (NFESC).

(1) In addition to providing a method of reporting facility energy costs and consumption, the Navy's EAR lists each shore activity's FY 1985 baseline, monthly and quarterly Megawatt Hours (MWH) and MBTU consumption, costs and square footage; compares current consumption with the baseline; and measures progress toward reaching the Congressional mandated goal of reducing energy 30 percent by FY 2005. (Also, as of the first quarter of FY 1996, the EAR provided a basis of collecting water consumption data.)

(2) The EAR system was upgraded in FY 1992 to allow each reporting activity to enter data directly into a microcomputer data tracking system, the Micro-EAR. The timely and accurate submission of data to the EAR system, via Micro-EAR, is vital in order to accurately measure current energy consumption as compared to the FY 1985 baseline. Activities not able to report via modem using Micro-EAR have the option to send their DUERS data to NFESC by letter or fax. NFESC will enter these data into their database. In addition activities can extract their segments of energy consumption tracking data via the Micro-EAR. Activities not able to access the Micro-EAR via modem to extract energy tracking data from the DUERS database may obtain hard copy reports from NFESC by special request.

b. Reference (a) provides the authority for the Annual Energy Report, under report symbol DD-A&T (M) 1313 (4100), which describes any actions taken in the preceding FY

to meet or exceed the aforementioned goals. This report will be submitted by 1 February of each year to Commander, Naval Supply Systems Command (NAVSUP 4251).

6. Capital Improvement Programs. The two major programs that finance energy and water conservation projects are the Energy Conservation Investment Program (ECIP) and the Federal Energy Management Program (FEMP). Enclosure (1) to reference (d) describes these programs. ECIP is a special MILCON-funded program designed to improve energy efficiency of existing DOD facilities and equipment. ECIP funds construction projects over $300K and may also fund repair projects costing more than $300K. ECIP funding is set aside so that projects funded under ECIP do not compete with other MILCON projects for funding. Typically, ECIP projects are executed through traditional design and construction contracts. FEMP provides funding for all eligible projects not funded and executed through ECIP. FEMP projects are funded by a special category of Operations and Maintenance (O&M) funds, managed by Office of the Secretary of Defense (OSD), which may be executed by such methods as Job Order Contract (JOC), turn-key, design/build, in-house labor by the activity or Public Works Center (PWC) or utility service contract.

a. For projects to be competitive for ECIP or FEMP funding, they must do the following:

(1) Conserve energy or water.

(2) Have a simple payback of 10 years or less.

(3) Have a savings to investment ratio (SIR) of 1.5 or greater.

(4) Be able to meet strict DOD fund obligation schedules. Each project must be documented by DD Form 1391 plus a complete life cycle cost analysis.

b. NAVSUP activities should work closely with their host activity (if applicable) and with their geographic Naval Facilities Engineering Command Engineering Field Division (NAVFACENGCOM EFD) in selecting, preparing and submitting candidate projects for ECIP or FEMP funding.

c. The project packages, for candidates for ECIP or FEMP funding, will be submitted by the activity to NFESC (Code 22) via the activity’s EFD and NAVSUP 4251.

d. Projects that do not qualify for ECIP or FEMP, but which provide quick payback for low investment, should be identified in the Annual Maintenance Execution Plan (AMEP), in the Annual Inspection Summary (AIS) or on the lists of Maintenance of Real Property (MRP) projects submitted at the beginning of the year, at midyear or year-end for consideration for bureau controlled or special funding.

7. Relationship with Naval Facilities Engineering Command Engineering Field Divisions (NAVFACENGCOM EFDs). NAVSUP activities will maintain close relationships with their geographic EFDs, especially in the area of technical advice and assistance, in preparing projects for funding via ECIP or FEMP. A close working relationship with a geographical EFD will ensure the EFD's Energy Survey Report of the activity is current and recommendations are being implemented. Also, each activity must stay current on the status of Demand Side Management (DSM) and Energy Savings Performance Contracts (ESPC). These programs are available to assist activities in reducing energy consumption and are highly encouraged.

8. Secretary of the Navy (SECNAV) Energy Conservation Award Program. Reference (e) provides detailed guidance on this annual award that recognizes those Navy activities that excel in energy conservation. Nomination packages are prepared by activities and forwarded to NAVSUP Headquarters, NAVSUP 4251, by 1 February for review, analysis and selection for the major claimant’s top candidates. NAVSUP’s nominees will be forwarded to NAVFACENGCOM (Code 1336) not later than 10 March. The SECNAV award winner nomination packages will then be forwarded to the Department of Energy (DOE) for consideration for a Federal award. These energy award programs receive high visibility within DOD and DOE, with past year award winners personally congratulated by the Secretary of Defense in ceremonies on Capitol Hill.

9. Current Standards and Restrictions. Current standards and restrictions, if carefully practiced, will result in significant energy savings. These are:

a. Building Temperature Restrictions

(1) For cooling, thermostats will be set no lower than 76 degrees Fahrenheit (°F), (24.4 degrees Celsius (°C)). During unoccupied hours, thermostats should be reset to the highest, practical setting.

(2) For heating, thermostats will be set no higher than 70 °F (21.1 °C). During unoccupied hours, thermostats should be reset to no higher than 55 °F (12.8 °C).

(3) For domestic hot water heaters, temperatures should not exceed 105 °F (40.6 °C) at point of use. For hot water heaters with no precision setting capabilities, the lowest possible setting should be used.

(4) Where practical, NAVSUP activities with warehouses will discontinue heating the warehouses or will heat (other than enclosed office areas) to a maximum of 55 °F (12.8 °C).

(5) Compliance with temperature standards will be reviewed during inspections and site visits of activities.

b. Building Lighting Standards

(1) Administrative Areas. In order to reduce electrical use, strict compliance to the lighting standards is required in administrative areas 50-foot candles at work stations, 30-foot candles in work areas, and 10-foot candles in nonworking areas. All possible lighting systems shall be turned off during unoccupied hours. The use of incandescent lighting shall be minimized. High efficiency fluorescent and other high efficiency lighting systems shall be used to the maximum extent possible.

(2) Warehouses. The general illumination level in warehouses shall not exceed the values listed below, measured 4 feet from the floor as prescribed in the MIL Handbook 1190:

Type of Warehousing:	Foot Candle Intensity
Inactive	05*
Active-bulk	10**
Rack	20
Bin	05***
* Turned off when possible.	
** Main aisles may be lighted to 15-foot candles.	
*** Specialized lighting designed to illuminate the bins as required is to be provided by the user.	
Mechanical Material Handling	
(a) Control Centers and Stations	30
(b) Loading and Unloading Areas	20
(c) Accumulation Conveyor Lines (unmanned)	10

10. Responsibilities. The following responsibilities are assigned within NAVSUP Headquarters:

a. The Assistant Commander for Ashore Support (SUP 42) is responsible for implementing policy and directing the overall energy management program within NAVSUP and for coordinating the overall energy conservation program.

(1) The Facilities Branch (SUP 4251) is assigned collateral duty as Energy Coordinator for NAVSUP and central point of contact for energy related matters. SUP 4251 will ensure NAVSUP's coordination with DOD, CNO, NAVFACENGCOM, NFESC and other Government agencies involved in energy management. SUP 4251 will promote energy efficiency and use of more abundant alternative fuels in use of materials handling equipment. SUP 4251 will be point of contact on matters of Energy Conservation Week, Energy Management Assessment and Assistance Visit (EMAAV), Naval Reserve Energy Management Assist Team (NREMAT), Shared Energy Savings Programs (SESP), Energy Security Programs, etc.

(2) SUP 4251 will coordinate energy related matters of Military Construction and Energy Conservation Investment Program projects.

b. The Deputy Commander for Contracting Management (SUP 02) will:

(1) Coordinate with SUP 40, the Defense Fuel Supply Center and NAVFACENGCOM EFDs in the development of fuel, contracting procedures for Navy use to minimize fuel procurement interruptions in times of energy shortage.

(2) Promulgate to Navy Field Contracting System activities applicable initiatives that foster energy conservation through the contracting process, including the use of evaluation factors for consideration of energy conservation, life cycle costs, and availability of alternative energy sources in contract preaward surveys and negotiated procurement actions.

c. The Assistant Commander for Navy Material Transportation (NAVTRANS 44) will ensure fuel consumption is a consideration in the development of material transportation policies, movement plans and changes to established transportation/distribution systems.

d. The Inspector General (IG), NAVSUPSYSCOM (SUP 91), will include energy management in the NAVSUP IG "Inspection Guidelines for Functional Areas."

e. The Deputy Commander, Navy Fuel Management System (SUP 40), will promulgate procedures for the collection, processing and recycling of contaminated and waste oils in coordination with the Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM).

11. Action

a. NAVSUP activities will adhere to the requirements of this instruction and ensure consideration of energy conservation measures within the systems development, procurement and acquisition processes for which they have responsibility. It is especially important NAVSUP's activities evaluate the following equipment in terms of energy efficiency when considering their acquisition: office equipment, including modular furniture, automated data processing equipment, lamp and lighting systems, HVAC equipment and associated environmental controls.

b. NAVSUP field activities will:

(1) Establish energy management plans to achieve the objectives, goals and standards of this instruction.

(2) Designate a technically competent individual as Energy Manager. Ensure this individual spends the appropriate amount of time carrying out the following duties:

(a) Directing and coordinating energy management at the activity, including the promotion of energy awareness,

(b) Reviewing all project submissions, minor construction projects as well as repair and maintenance projects, for conformance to energy efficiency principles, and to ensure the most energy efficient materials and equipment are used,

(c) Managing all "energy" projects,

(d) Submitting the required energy reports,

(e) Attending yearly training which maintains the Energy Manager's technical and energy management proficiency.

(3) Encourage and publicize energy conservation among all employees and encourage personal involvement. Although it should be a year-round evolution, this effort will be highlighted during observance of the annual Energy Awareness Week. Static displays, energy awareness films, free samples of energy saving devices and literature, and presentations by

utility company representatives are suggestions that emphasize the importance of energy awareness.

(4) Assure timely and accurate monthly submission of data to DUERS. Assure timely and accurate submission of the activity's Annual Energy Report, due 1 February.

(5) Ensure Energy Security Plans are current and submitted upon request and ensure emphasis is placed on correcting those deficiencies which degrade activity mission because of energy dependence.

c. NAVSUP field activities which are tenants will cooperate fully with their host activity in the host's energy plan and objectives.

d. NAVSUP field activities are to keep NAVSUP's Energy Coordinator, SUP 4251, advised of any information and initiatives which will positively or adversely affect energy utilization/conservation at the activity. Where appropriate, this information and initiatives will be shared with others within the claimancy so we can learn from one another how to better manage energy.

D. E. HICKMAN
Commander

Distribution:
SNDL: FKM (Shore Activities under the Command of the Commander, Naval Supply Systems Command)

Copy to:
SNDL C21; X-32 (NAVSUP Offices and Directorates); 09A; 09I; 91; SUP 35C (5 copies); SUP 4251 (40 copies); NAVICP Mech Mail Room M0852 (15 copies)

Order from:
Naval Inventory Control Point
Cog "I" Material
700 Robbins Avenue
Philadelphia PA 19111-5098

Available on NAVSUP WEB site:
http://www.nll.navsup.navy.mil and
PUB 600 Naval Logistics Library (NLL)